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MEMOIRS AND JOURNAL OF HUGH JUDGE.

(Continued from page 210.)

3d mo. 5th, 1789. Our meeting to-day was silent, except a few words communicated by dear William Canby. May we in silence more and more learn the counsels of wisdom, even the deep things of God, which are by no other means so likely to be attained, as in profound silence. In this state, the mind is drawn, at times, to view things with great clearness, and is carried above these lower regions, to see and contemplate things of a higher nature. The apostle could tell some in that day, that they were come to Mount Zion, to the city of the living God, to the general assembly and church of the first born; all of which is to be come at and known in the silence of all flesh, our own wills being subjected and brought to be as nothing. Oh! the wonderful privileges of the Gospel. The more any are emptied of self, the more they are filled with Christ; and from being sons of men, they become sons of God, heirs, and joint heirs with Christ. Oh! that the minds of men were more raised above these lower enjoyments, to contemplate on things that are indeed excellent! Many are slaves to earth and earthly things; the mind, like the inn of old, has no room, and there is scarcely time to spare to think seriously on things that are durable. Great hurt and loss is thus sustained by letting the mind so constantly run after the gain and pleasures of this fading world. Was not this the case, how many more bright and shining lights there would be, than what there now is, in the great cause of truth and righteousness in the earth! My soul travails for greater redemption both in myself and others.

24th. I got home from attending the Spring Meeting of ministers and elders in Philadelphia. At this meeting Samuel Smith obtained a certificate to visit the brethren on the other side of the water. Our beloved friend and brother in the Truth, Job Scott, and his companion, Daniel Aldrich, were at this meeting on their way to the Southern States. Thus, the servants are moving about, some one way and some another, in the cause of truth and righteousness. Oh! that the labors of love bestowed, may prove effectual to the gathering of many to the true Shepherd and the one sheep-fold. "I am the door," said Christ, "by me if any man enter in, he shall be saved, and shall go in and out, and find pasture." How clear it is, that the soul-sustaining food, the bread from heaven, is no further known, than as we are united to Christ. The more we are influenced by the Holy Spirit, the clearer we see that all true riches, all right knowledge, all comfort and consolation come from God. It is impossible for the children of men to attain to any degree of the riches and joy of the Holy Spirit, in any other way than by Divine inspiration. All knowledge and understanding, without this, is from beneath; and the wisdom of this world, instead of bringing people to God, leads them to a greater distance from him.

4th month 6th. Happy are they that fear always, that set the Lord always before them, and who have him in their thoughts from morning till evening, when they lie down and when they rise up, and as they move on through the business of the day. Oh! all ye inhabitants of the earth, come away from your toys and your pastimes, your sports and diversions; come, ye dreamers, ye speculators,—come, enter into your own souls and be still, that ye may know God; there the true knowledge of him is to be found, and not in the regions of self-imagination. However high the tower may be that you have been laboring to build, know assuredly that confusion will attend it; it is but Babel still. Come, then, thou toiler, enter into thyself, that thou mayest know, as thou art passing along, an acquaintance with the best of company. Oh! come, my dear children, fear God always, and keep him continually before your eyes, that he may direct you in all your goings. If I have not an earthly inheritance to leave you, I leave you this counsel: I have never sought the honors and riches of this world; but, from my youth up, I have sought an acquaintance with my God; and I have now for many years past (to the praise of

his everworthy name be it spoken) found that which my soul thirsted after. Therefore, whatever station you fill in this life, whether as masters or servants, devote a part of your time to wait upon Him who made you. I do know that this advice is good. The satisfaction that my soul has partaken of, at such seasons, I hope never to forget. But I would recommend to you most earnestly, to go through the course of your whole business daily, as though you saw the Almighty with your outward eyes. Endeavor to have an inward sense of his being always present with you, the overseer of all your ways, words, and actions. This will tend to keep the heart clean.

O, my dear children, and all who may read these lines, let me entreat you to bow to the power of God in you; for this is the way to become co-workers with the Holy Spirit. Never be ashamed of the cross of Christ; give up your wills to its requirings. Remember, the Lord loves a cheerful giver. Believe me, you cannot begin too early to wear the yoke of Christ, and to bear his cross. Do not, I entreat you, trifle with a matter of such momentous consequence. Eternal life is purchased upon no other terms than what are laid down in the gospel; namely, the selling of all. If you love any thing more than Christ, you render yourselves unworthy of him. And what will all the world signify in a day that is hastening upon us all, if he should hide his face from us,—if he should say, I know you not? Therefore, while you have time and opportunity obey the gracious calls of heaven, and close in with the offers of his love, that thereby you may be enabled to work out your soul's salvation with fear and trembling.

The state of our religious society, at times, appears mournfully low. To look at our meetings on first day morning we show out large. Those in the afternoon, and on other days of the week, are often small; and while this is the case, leanness will be likely to be our portion.

The frequent, or even constant attendance of first day meetings, while others are neglected, looks at best but like offering the lame of the flock; I mean by those whose religious principles enjoin them to attend all their meetings. Yet I am sensible that barely going to meetings will do little for any of us; but when it becomes a matter of indifference to men and women, and they can go or stay at home as it suits them, feeling nothing to bind them to this reasonable duty, they are of little worth in society; for those who are slack in the attendance of meetings, are often idlers when there, and frequently subject to drowsiness or other weaknesses. Surely there will be a day of awakening overtake the professors of Truth;—a day of purging and cleansing the camp. We are become a great multitude,—a large body of people; and I often see and feel that things are much in the mixture among us. Many are employed in the discipline of the church who are not sound, healthy members of the body; whereby weakness is increased in society; for how can a man be supposed fit to labor for the restoration of offenders, when he is unfaithful to his Maker, a delinquent himself, and a poor example to his own family? A fountain cannot send forth salt water and fresh at the same time. The gospel direction remains unalterably the same, "First cast the beam out of thine own eye, then shalt thou see clearly to cast the mote out of thy brother's eye." I feel more and more a care in naming Friends to weighty services in society; and believe a caution is necessary on this head, in most of our meetings for discipline. It is a weighty thing to undertake to be mouth for the Holy Spirit, in separating Friends to services in his church.

5th mo. 3d. In company with my wife, I attended Chichester meetings; and as we were coming home in the afternoon, the horse took fright and ran violently down hill with the chair, in a very bad piece of road. My dear wife was thrown out, and fell with great force on her head and shoulders; by which she was so stunned, that I thought she was killed. After some time, she came to, so that we got her home, it being about two miles. The thought of being stripped, as in the twinkling of an eye, of a beloved companion, deeply affected my heart; but I looked to Him for help and support, who has all power in heaven and earth, and the arm of his everlasting kindness was underneath. Her understanding did not return till next morning; when she knew where she was, but remembered nothing of what had happened, although she felt herself very much bruised. The day following, my spirit was depressed and covered with a weight of awfulness, in thinking of the danger we were in, and how narrowly my dear wife escaped being killed. Oh! that I may never forget the hand that interposed, and the power that protected. I give thee thanks, O, Majesty of heaven, that we were not dashed to pieces, or crippled for life. Merciful kindness, indeed! praises, praises be to thy holy name, and that forevermore.

5th. I went to see Hannah West, who appeared to be near her close; yet she had her understanding clear and sound. As I sat by her she took hold of my hand, and asked me how it looked to me; I told her I had no doubt all was well with her. "And will be so?" said she. I answered, yes. After a pause, she said, "I don't know why I am held in this way. I have seen a glorious state; but my example has shown but glimmeringly to what it might have done, had I been enough given up. I feel a great concern for our women's meeting, yea, for all our meetings. Oh! that women elders may be faithful; for I have had a prospect that the labors of some that are now living will be blessed; and that Truth will yet prosper in this place, and among

women Friends, by the faithfulness of some that are little thought of." She then mentioned a piece of writing she had prepared, which she said might be made such use of as Friends thought proper after she was gone; and named Mary Canby to have the care of it. She then added, "I have thought much of thy neighbor's daughters, whose appearance indicate a deviation from the purity of our principles and profession. But I have had a comfortable hope that their father will do as Abraham formerly did, command his household after him. I know he has his exercises, and they will be likely to increase."

This opportunity was a heart-melting time to those present. Oh! the excellency of having the mind calmly composed at such an awful season, when the prospect is at hand of entering another state of being, never to be changed!

(To be continued.)

JOHN BANKS.

(Continued from page 212.)

And about the beginning of the year 1670, which was the first time that I went to Ireland, and our ancient friend, John Tiffin, having drawings thither also, we took shipping at White Haven, and landed at Carrackfargus, in the north of that nation, for the north was most before us. And after we had visited meetings thoroughly, and were well satisfied of the truth of our service, we visited Friends along to Dublin, and thereabouts; and having had good and refreshing times with Friends in that city, and elsewhere, and being clear, we returned home to our own country.

But it was not long until the Lord required it of me to go to Ireland again; and in the third month, 1671, I was made willing to go in obedience to the requirings of the Lord; and his power and presence was with me. My desire was to be at the Half-yearly Meeting at Dublin, which begun the fifth day of the week. So I went to White Haven the third day before, with an intent to take shipping there, and my dear wife and several Friends did go along with me. But the wind that day was quite contrary, so that my wife and friends would have persuaded me to go home again, being ten miles, because the wind was not like to serve. But I told them, "I could not then; I might rely upon Him that had power to command the wind and seas, even the Lord alone." And so they went home, and I went that evening to a vessel that was ready to go, and I told the owner that I was willing to go with him to Dublin; and I desired some of his men, that if the wind was fair e're the morning, that they would call me at such a house.

They answered "yes, with all their hearts; but did I think the wind would serve so soon that was so contrary?" I said, "It was possible with the Lord that it might." For I had faith in the thing, according to what was revealed unto me.

So in the morning, about the dawning of the day, being the fourth day morning, one came calling aloud to me, "to make haste and come soon, the wind was fair and the ship near ready to sail." And a brave ready, passage we had; so that, according to my soul's desire, I came into the meeting aforesaid on fifth day, within half an hour after it was set; and a glorious, heavenly meeting it was, where many faithful brethren from all parts of the nation were come. And the Lord's power was over all; and several living testimonies given to show forth the greatness and sufficiency thereof; wherefore we had cause of rejoicing in the prosperity of the Lord's work, and our concern therein, and our unity and brotherly fellowship one with another.

And the next day in the evening, as I was waiting upon the Lord, a great weight came upon my spirit, under which exercise I did patiently abide, until it opened in me in the motion of life, that I was to go southward to a place called Wicklow, (though I knew it not then, being twenty-four miles south from Dublin), where no meeting of Friends before that time had been that I could hear of, only one or two friendly people in it. But before I went I wrote the following letter to my wife:

Dear Wife,—That nearness of love that I still feel in my heart towards thee, is always beyond what I can express; yet I find it as an engagement upon me to show forth the same in some expressions on this wise at this time. It is in my heart to say unto thee, my dear, be steadfast in thy mind, and in the lowliness thereof always watch and wait, to be kept and preserved near unto the Lord; and so wilt thou feel thy peace and thy unity to increase with him and his people, and assuredly with me thy husband, in whose work and service, which is great and weighty, I am accordingly concerned, and the prosperity thereof is become my chiefest joy and delight, and for the managing and maintaining and upholding of which I am willing, and in measure able, through the goodness of the Lord unto me, to spend and be spent, that He may have the praise, honor, and glory returned to him, who is worthy forever, whose the work is, and who in his appearance is mighty by his own power for the carrying on of the same.

I say, my dear one, my daily cry and secret breathings is to the Lord for thee, that thou mayest be preserved in faithfulness unto him, even to what thou knows of him, made manifest by his pure light in thee, by which the enemy, with all his cunning and subtility, and reasoning (that darkens) is discovered, and the outgoings of the mind judged; and the power that therein is received, by waiting in the light, brings all things into good order, both within and without. Oh! feel my love, and the reach of my life and spirit, to the tendering of thy heart, with whom

I am bound up and truly joined and united, though at this distance.

Be of good cheer, for my soul dearly loves thee, and in my heart thou art written never to be forgotten wherever I go or come; together with our dear babes, which greatly tenders my heart to think of. May the Lord preserve you all in the bosom of his love; who can be more to thee and thine than I ever was, or yet am or can be; into whose fatherly protection I commit thee, together with myself and all that we enjoy, to be ordered, kept, and preserved, for it is but reasonable he should have all offered up unto him, being what we are, and what we have, we are by him, and have received from him, that he may have the praise of all, who is eternally worthy, God blessed forever. Amen.

By this, thou with Friends may know, that I am well every way, and have a comfortable and good service among Friends and friendly people in this city, where there is great need of faithful laborers; yea, for the most part as I understand, even all over this nation; because that many are inquiring the way to Sion. Wherefore God's faithful servants are concerned to visit city and country, that the gathered may be established, and that they that are not yet gathered may be gathered, as I in measure am a witness; for when I came to this city on the fifth day, (where we had a heavenly meeting,) the sixth day in the evening, as I was waiting upon the Lord, a weight with an exercise came upon my spirit, and in some time after it opened in me that I was to go to a place southward to have a meeting, next first day; yet I knew of no place where any meeting had been kept, but the exercise of it remained weighty upon me. So I inquired of Friends if they knew of any meeting kept that way next first day; but none could tell me of any, until at last I told William Edmondson of my exercise, and he named Wicklow unto me; and an answer was in me, "that was the place I was to go to," being twenty-four miles off, where a meeting had never been before,—of which hereafter. So I rest thy loving husband,

J. B.

Dublin, in Ireland, the 22d of 3d month, 1671.

And accordingly I went there on 7th day, and two Friends with me, to an inn that night, and I gave it forth that I intended to have a meeting in that town the next day, being the first day of the week. So the report going forth, people said there was an English Quaker come to preach there, and there was a mighty noise of it in the place, the people being stirred up by the priests. The Governor (one Hammon) lived at the castle, and there was a garrison of soldiers kept there, and the priest labored much with the Governor aforehand, as I was told, to put me in prison, as hereafter it is more evidently manifest.

Now one of the friendly men I have mentioned, being a carpenter, was willing to let us have the benefit of his work-house to meet in, there being several Friends and friendly people come out of the country. And as I was ready to go from the inn where we had lodged, the landlady said to me, "For God's sake, go not along the street, for there is a guard of musketeers waiting at the cross to take you; I will show you a back way." I said, "I accept of thy love, but I must not go any private way, but along the town street, for I have a testimony to bear for the Lord in this town in love to the souls of the people." So by the time we were well sat down in the place as aforesaid, before my mouth was opened, came a sergeant with a halbert, and a guard of musketeers with him, and the sergeant said to me, "That I must go along with him before the Governor." I answered, "What authority hast thou to take me? If thou hast a warrant so to do, I shall go." He held out his halbert, and said, "this is my warrant." I said, "You need not have come to us with your swords and guns, as those that came against Christ with swords and staves; we are known to be a peaceable people. Howbeit I shall go with thee." So they took me to a house where was the priest, his wife, the Governor and his man, and some more. So the priest, being in a great rage when I came in, (like a wolf to devour a lamb), and said to the Governor, "Sir, this is the deceiver, this is the deluder that is come from England to delude the people here; I hope you will do justice and execute the law."

The Governor being pretty moderate, said nothing for some time, but walked to and fro, being a large room, and the people being in an uproar, pressed in at the door, and I being willing to let the priest rage on a little, till he had something vented himself, that he might be the more manifest to the people. At last I said to him, "Thou sayest I am a deceiver and a deluder." He answered in great fury, "So thou —so thou art." But I said, "Have patience, and let thy moderation appear unto all men, and hear what I have to say to clear myself of thy false accusation; for I shall not take thy assertion for proof. I have had patience to hear thee. Art thou a minister of Christ?" "Yes, said he, "I am." I replied, "But if I prove thee a liar, as by the witness of this people thou art, in charging me with that which thou canst make no proof of, and if so thou art out of the doctrine of Christ, and so no minister of Christ, but of anti-Christ, and so of thy father the devil. And therefore thou art the deciver and deluder of the people."

Upon which the priest's mouth was stopped, and he made to get out at the door; but the people was so thronged he could not, and so stood trembling. Then I turned to the people, "You hear," said I, "that your minister has charged me, without proof, that I am a deceiver and a de-

luder; did you ever see my face before? or did you ever hear me speak before now? Which of you (or who) have I deceived or deluded?" But they were all silent. And some more words I spoke to manifest to the people that their minister was no minister of Christ, according to the Holy Scriptures. At which the priest cried out to the Governor, "I pray you sir, take him away (he trembling still); I hope you sent not for him to let him preach here."

All this time the Governor was silent, and I declaring God's everlasting truth to the people. At last the priest's wife said to the Governor, "I pray you sir, let him not preach here, commit him to jail,"—it being near by, and the jailer being present.

(To be continued.)

CONSCIENTIOUS FEELING.

Abstinence from the use of spirituous liquors may become fashionable; and if the chains of a vicious habit are broken by this means, a valuable end will have been attained. Or, if the temptations to vicious indulgence, by which the habit of intemperance is engendered, are removed through the influence of the same cause, an important good is achieved to any individual thus circumstanced. But every means for advancing this righteous testimony should be founded on conscientious feeling. This actuating principle will give dignity and permanent usefulness to every enterprise for meliorating the condition of man; and this is the touchstone by which the real merit of all such actions should be tried. When they bear this seal they possess an intrinsic value above all computation, and none can set bounds to their ultimate effects. The following narrative will illustrate the truth of these remarks:

A merchant, residing in a village of a neighbouring State, carried on an extensive traffic; and among other articles of trade, he dealt largely in spirituous liquors. One day a poor man, whose bloated countenance and ragged apparel, indicated the victim of intemperance, called to have his bottle filled. The father, as usual, handed it to his son, a lad of twelve or fourteen years of age. The youth went into an adjoining apartment to draw the liquor, but his parent observing that he remained longer than ordinary, went to inquire the cause. He found his son with the empty vessel in his hand, standing by the cask, and apparently much agitated by conflicting emotions. He assured the father, on his inquiring the reason of the delay, that he could not draw liquor for a man who he knew would use it to his own destruction; and he fully believed that the individual who had applied for the drink would become intoxicated therewith. A conscientious act even in a child or youth will always command the respect of the good, and this compliance with a requisition of duty had a wonderful effect on the mind of the father. He received the bottle from his son and immediately returned it empty to the man who gave it, assuring him at the same time that he could not have it filled at his store. But the impression made by this act of obedience, was not to terminate here. The parent was a thinking, serious man; and was also a person of high standing in religious society. He resolved again and again the scruples of his son; and the more he reflected on them, the more he became convinced of the iniquity of the traffic in ardent spirits. He finally concluded to banish them from his store forever—which he did without delay. But the spring of this Divine impulse was not exhausted. There were other merchants in the village who dealt in the same article to a considerable extent. They observed that one of their competitors had willingly resigned all the emoluments arising from the sale of this destructive article, through conscientious motives. The circumstance which gave rise to this resolution had become known in the neighborhood, and excited the highest respect towards both the father and son; who discovered that their profitable customers did not abandon them for acting according to what they believed a conscientious duty. Finally, all the storekeepers in the village in a short time relinquished the sale of spirituous liquors, and the neighborhood became relieved from the moral pestilence, as far as the discontinuance of the traffic in ardent spirits can effect so desirable an object.

Reader! reflect on the change wrought in the minds of this little community, and doubt, if thou canst, the *omnipotence* of the principle which produced it. Such examples as this are most encouraging to those who are treading the path of self-denying virtue. Here was no splendid achievement combining the influence of all the *wealthy and honorable* individuals of the place, sacrificing at the altar of public opinion; but, like the widow's mite cast into the treasury, this humble offering was worth "more than them all." But it is not for those who are daily giving practical lessons of self-denying piety, to compute the effects of their unpretending virtues: for they are conscious that the work is the Lord's, and it rests with him to bless it according to his good pleasure. Many examples might be adduced to show that prompt submission to such requisitions as the one related, has frequently been abundantly prospered; or, in the expressive language of inspiration, that "obedience is better than sacrifice, and to hearken than the fat of rams." But how many who have been incited to virtuous resolutions by the *living ray* of Divine light, have nevertheless faltered in their first steps; for the corrupt example of their friends and kindred, or the dread of singularity, have too often blasted the opening buds of virtue, and converted the rich promise of fruit into a barren waste.

GEORGE STEPHENSON, THE INVENTOR OF THE LOCOMOTIVE.

(Continued from page 223.)

In 1789 another plan was proposed by Thomas Allen of London, but it was not until 1802 that a steam carriage was built adapted for use on common roads. This was done by a Cornish miner named Richard Trevethick. The experiment was tolerably successful. On his way to London, while the vehicle was going at the top of its speed, and had just carried away the rails of a gentleman's garden his companion descried a closed toll-gate ahead, and called to Trevethick, who was behind, to slacken speed. "He immediately shut off the steam, but the momentum was so great that the carriage proceeded some distance, coming dead up, however, just on the right side of the gate, which was opened like lightning by the toll keeper. "What have us got to pay?" asked Vivian. The poor toll-man, trembling in every limb, his teeth chatering in his head, essayed a reply—'Na-na-na-na—' 'What have us got to pay, I say!' No-noth-nothing to pay! My dear Mr. Devil, do drive on as fast as you can; nothing to pay!!'"

His next step was to construct a locomotive for rail roads. This was completed in 1804, but after a few experiments was given up. No further progress was made for several years. In 1811, a new patent was taken out by Mr. Blenkinsop of Leeds, and the next year his engines commenced running on the railway of one of the neighboring colleries. This was followed by improvements by the Chapmans, Brunton, Blackett, and others, which met with more or less success, until 1813, when Stephenson was provided with funds by Lord Ravensworth, and set about the construction of a locomotive according to his own idea. After much labor and anxiety, and frequent alteration of parts, this was at length completed, and placed on the Killingworth Railway for a trial trip, July 25, 1814. It succeeded in drawing a load of 30 tons at about four miles an hour, and was the most efficient working engine yet constructed. Successive improvements were made within a year, and before the close of 1815, the perfect germ of the present locomotive engine was fully established. But the most important steps yet remained to be taken.

Stephenson alone remained in the field after all the other improvers and inventors of the locomotive had abandoned it in despair. He continued to entertain confident expectations of its eventual success. He even went so far as to say that it would yet supersede every other tractive power. Many looked upon him as an enthusiast, which no doubt he was, but upon sufficient grounds. As for his travelling engine, it was by most persons regarded as a curious toy; and many, shaking their heads predicted for it a terrible blow up some day. Nevertheless, it was daily performing its work with regularity, dragging the coal wagons between the colliery and the staiths, and saving the labor of many men and horses. There was not, however, so marked a saving in the expense of working when compared with the cost of horse traction, as to induce the northern colliery masters to adopt it as a substitute for horses. How it could be improved, and rendered more efficient as well as economical, was never out of Mr. Stephenson's mind. He was quite conscious of the imperfections both of the road and of the engine; and he gave himself no rest until he had brought the efficiency of both up to a higher point. He worked his way step by step, slowly but surely: every step was in advance of the one preceding, and thus inch by inch was gained and made good as a basis for further improvements.

At an early period of his labors, or about the time when he had completed his second locomotive, he began to direct particular attention to the state of the road, as he perceived that the extended use of the locomotive must necessarily depend in a great measure upon the perfection, solidity, continuity and smoothness of the road along which the engine travelled. Even at that early period, he was in the habit of regarding the road and locomotive as one machine, speaking of the rail and wheel "as man and wife."

It is curious to note the slow process by which the importance of his invention was brought to the recognition of the public. His engines were in use for many years without exciting any general interest. It is not difficult to account for this apathy. He was an unlettered man, unable to give utterance to the thoughts which harassed his mind, and the scientific world of London could gain no glimpse of good from so remote and humble a Nazareth as a Newcastle colliery. Even the local chroniclers took no notice of the invention. But a new day was about to dawn. After a violent struggle, in which Mr. Stephenson took a prominent part, a bill was at length carried through Parliament authorizing the construction of the Liverpool and Manchester Railroad. Mr. Stephenson was appointed principal engineer, with a salary of $5,000 per annum, and at once proceeded with his characteristic energy to the accomplishment of his task. The work was commenced in June, 1826. By the end of 1828, the directors found that they had expended over $2,000,000 on the works, and that they were still far from completion. "They looked at the loss of interest on this large investment, and began to grumble at the delay. They desired to see their capital becoming productive; and in the spring of 1829, they urged the engineer to push on the works with increased vigor. Mr. Cropper, one of the Directors who took an active interest in their progress, said to him one day, 'Now, George, thou must get on with the railway, and have it finished without further delay; thou must really have it ready for opening by the 1st day of January

next.' 'Consider the heavy character of the works, Sir, and how much we have been delayed by the want of money, not to speak of the wetness of the weather; it is impossible.' 'Impossible!' rejoined Cropper; 'I wish I could get Napoleon to thee —he would tell thee there is no such word as "impossible" in the vocabulary' 'Tush!' exclaimed Stephenson, with warmth; 'dont speak to me about Napoleon! Give me men, money, and materials, and I will do what Napoleon couldn't do—drive a railroad from Liverpool to Manchester, over Chat Moss!' And truly, the formation of a high road over that bottomless bog was, apparently, a far more difficult task than the hewing of Napoleon's far famed road across the Simplon.

The road was so far completed, that the Directors were called on to decide as to the kind of tractive power to be used on it. The question was between fixed engines and locomotives. The former had many advocates; for the latter, Mr. Stephenson stood almost alone. The most celebrated engineers did not believe in the locomotive, and would not even take the trouble to examine it. The leading members of that profession studiously avoided Mr. Stephenson. Had the locomotive system depended on them, it would have been swamped from the start. As the discussion proceeded, in regard to the power to be adopted, the Directors were deluged with all sorts of schemes. The projectors of England, France and America, seemed to be let loose upon them. Some recommended working the wagons along the line by water power. Some proposed hydrogen, others carbonic acid, others atmospheric presure. One urged a plan for a greased road with cog rails; various kinds of steam power were suggested; and the Directors were wholly unable to choose between the conflicting schemes. At length the subject was referred to a select Committee of engineers, who reported in favor of fixed engines in preference to locomotive power. "Here was the result of all George Stephenson's labors! The two best practical engineers of the day concurred in reporting against the employment of his locomotive! Not a single professional man of eminence could be found to coincide with him in his preference for locomotive over fixed engine power. He had scarcely a supporter; and the locomotive system seemed on the eve of being abandoned. Still he did not despair. With the profession against him, and public opinion against him—for the most frightful stories were abroad respecting the dangers, the unsightliness, and the nuisance which the locomotive would create—Mr. Stephenson held to his purpose. Even in this, apparently the darkest hour of the locomotive, he did not hesitate to declare that locomotive railroads would, before many years had passed, be 'the great high ways of the world.'"

Uncertain as to what course to adopt, the directors finally decided to offer a prize of £500 for the best locomotive engine which should be produced on a certain day and perform certain specified conditions. It was generally felt that the fate of railways in a great measure depended on the issue of this appeal to the mechanical genius of England. Scientific men began to direct their attention to the new power which was then struggling into existence. In the meantime, public opinion was suspended, and the progress of the undertaking was watched with the most intense interest. On the appointed day, Oct. 1, 1829, Mr. Stephenson was on hand with a new locomotive; the trial was made between it and the other competitors; and the engine of Stephenson was so successful as to extinguish all rivalry. From that moment the triumph of his invention was secure. The great work of his life was now accomplished, although he continued in active service as an engineer for about ten years, more, when, in 1840, he retired from the more immediate pursuit of his profession, although not in a state of idleness.

Toward the close of his life, he gradually relinquished all responsible engagements in connection with rail roads, and devoted himself in a great degree to the cultivation of his estate and the enjoyment of rural occupation.

In the Summer of 1848 he was attacked with an effusion of blood from the lungs, of which he died, August 12, in the 67th year of his age. He will long be held in honored remembrance, not only for his industrial and scientific services, but for his personal character. He was emphatically a self-made man, but exhibiting the rarest virtues of that condition, with scarcely a visible trace of its usual felicities. It was his privilege to become a benefactor of the human race, by his wonderful mechanical gifts, with no taint of the jealousy of self-seeking, that so often vitiates the characters of inventors. His singular equanimity never forsook him. Confident in his own resources, he was never daunted by any want of faith or sympathy in the public; while no flush of success was ever able to impair the native modesty and simplicity of his genius.

To urge the importance of a prompt notice wherein disaffection manifests itself, George Dillwyn, on one occasion, used this language:—

"In some parts of America, the ants build large nests, plastering them on the outside with a kind of cement or mortar. A traveller finding one of these, made a hole in it from curiosity, whereupon one of the inmates came out to survey the injury, but soon returned. A noise was heard, and in a short time a large number came out of the nest, and began to repair the damage, which having accomplished, they returned to their dwelling."

He recommended Friends to imitate those

insects, and as soon as anything appeared amiss in society, to unite in early and harmonious labor.

SCRAP FROM EUTHANASY.

There is a hope in God that is merely despair of the world, but there is a hope that comes of having lived wisely; and that is the experience of a man who has seen on the tree of his life, as one after another its blossoms opened, how there was on them the dew of God's grace; and so when the tree begins to be bared in autumn, early or late, he does not fear but that it will live and be beautiful again, in that great spring-time that will be followed by no winter.

FRIENDS' INTELLIGENCER.

PHILADELPHIA, SIXTH MONTH 26, 1858.

DIED, at Waterford, Loudoun Co., Va., on the 10th inst, after a very short illness, ISAAC WALKER WILLIAMS, son of William and Mary Williams, in the 10th year of his age.

——, on the 16th of 6th month, at his residence in Baltimore Co., Md., ELI MATTHEWS, in his 92d year, a member, and for more than 50 years an elder, of Gunpowder Monthly Meeting.

Beloved and honored, surrounded by tender children, and grandchildren, and loving friends, this patriarch has passed away to his eternal home; his serene and beautiful old age giving evidence that the peace of God was in his heart, that his heaven was begun on earth. Through his long life, from his early youth, he permitted no worldly cares, no difficulties that could be overcome, to prevent his assembling with his brethren to worship the Father of Spirits, and the fruits of his dedication of heart were made manifest in action. Sweet and precious will be the remembrance of his useful and unspotted life. Calm and forgiving in spirit, he was a peacemaker in his neighborhood, a tender sympathizer with the afflicted. He was a bright example of that simplicity and moderation in all things, which he was earnestly concerned to impress upon his children. Many have passed away from earth, who under the shelter of his roof, have experienced his kindness and protecting care,—very many there still are who could rise up and call him blessed, and tell of precious teachings they have received from the daily example of this powerful preacher of righteousness.

He passed through this scene of probation, not without his share of sorrow and trial, but he knew in whom to trust; and in his case was the truth of the promise verified, "He that dwelleth in the secret place of the Most High, shall abide under the shadow of the Almighty."

His death corresponded with his life: through long protracted suffering he was calm, serene, and patient, waiting with cheerful composure at the door of his tent for the appointed messenger, whose approaching footsteps he could clearly discern; and when the closing hour came, he passed away like a child going to rest. His warfare is over, his crown is won, and amid our sorrow for our loss, our rejoicings for his eternal joy and rest, let us strive to follow him even as he followed Christ.

For Friends' Intelligencer.

LEARNER'S DEPARTMENT.

No. 2.

Letters to the young folks who desire to know more about the world they live in, than appears at first sight.

(Continued from page 218.)

If on a clear summer morning one of our young friends should chance to sally forth to gather for his herbarium some favorite wild plant which has just reached its time of bloom, he may observe, that the grass and the leaves and petals of plants are covered with sparkling drops of water, the sky is perfectly clear, there has not, perhaps, been rain for a fortnight, and yet millions of these little dew drops are splitting the rays of the morning sun as he glances from the eastern sky, into all the splendid variety of colors which the artist so vainly attempts to copy. In the early spring these little drops are often congealed into beautiful crystals of ice, called hoar-frost, which bespangle the foliage and sometimes destroy the embryo fruit upon the apricot, plum, and peach trees.

Every one must have observed how a glass or pitcher of cold water on a hot summer's day becomes covered on the outside with moisture. Sometimes this will run down and dampen the place where it is set, as if there were a leak in the vessel; again, all the young men in stores must have noticed how a rapid change of weather, from warm to cold, causes a copious deposit of moisture on the shop windows, particularly if water on the stove is being evaporated; in very cold weather, this, by freezing, forms the beautiful mimic forests and church spires, which, as they are sometimes observed on nursery windows, inspire the little ones with admiration at the works of Jack Frost.

Now all these and many similar *phenomena*, as such things are called by philosophers, arise from the same causes, and I propose in the present and next letter to give you some some hints which will enable you not only to explain them, but to apply the same principles to useful purposes in chemistry. You know very well that almost every substance in nature is capable of existing in at least *two* different states, according to circumstances. The hard metals, such as gold, silver, and iron, and even many of the very intractable minerals may be rendered liquid by heat alone, and solidify into hard, and sometimes into crystalline forms when the heat is withdrawn; these are said to be fusible.

Water belongs to the numerous class of *volatile* substances. It is capable of existing in *three* conditions, gaseous, liquid, and solid, according to temperature. The air contains water in the condition of vapor, or gas, as we might readily suspect from the fact that water is constantly evaporating from all the streams and puddles, and every situation where it is exposed. Now I have said that its condition of vapor

depends on temperature, and if from any cause it be suddenly cooled it loses its condition of invisible vapor or gas, and appears as a liquid, which is its most familiar condition; or if cooled to a certain point, it becomes solid ice or snow.

Now several circumstances may be remarked during the occurrence of this change of state in water. As the temperature rises in water enclosed in a glass vessel, we may observe at first minute bubbles to form and rise through the liquid, which consist of air, then larger bubbles are formed at the bottom, which rise a little way and then contract and disappear, producing a simmering or hissing sound. But as the heating goes on, these bubbles, which are steam, rise higher and higher in the liquid, till at last they reach its surface and escape, producing a bubbling agitation called ebullition or boiling, the steam escaping into the surrounding air.

The conversion of water into vapor, (steam,) is thus produced directly by the addition of heat to it, but it is very remarkable that it requires so much larger quantity of heat when in the condition of steam, than when in that of water. If over a steady fire, a certain quantity of ice-cold water requires one hour to bring it to the boiling point, it will require a continuance of the same heat for five hours more to boil it entirely off.

If you will place a thermometer in a vessel of water, and mark the point it will reach, when it begins to boil it will be found to be 212°, but you may go on applying heat until it is all boiled away, and it will rise no higher. This fact ought not to be overlooked by cooks. Soups, &c., made to boil in a gentle way by the application of a moderate heat, are just as hot as when they are made to boil on a strong fire with great violence, and the heat may generally be withdrawn, or much moderated, as soon as the boiling commences. Now what becomes of all the heat which is communicated to the water since it makes the water no hotter? Does it make the steam any hotter? Not as shown by a thermometer, but it enters the steam without raising its temperature, or in other words becomes *latent*. The latent heat of steam is about 1000 degrees, it takes away that much heat from any substance with which it is in contact at the time of its being formed. The philosophy of bathing the head in fever is found in this circumstance. When water is poured on a parched skin it evaporates and carries off the heat, which becomes latent, the part being cooled. When one "catches cold," it is by the evaporation from the surface being increased by a draft of air, the temperature being reduced. If the clothes get wet, the same thing occurs, the evaporation producing cold, and the cold causing catarrh.

In my next I will resume the subject and give you an experiment in evaporation. PATER.

(To be continued.)

From the Quarterly Review.

An Essay on the Beneficent Distribution of the Sense of Pain. By G. A. ROWELL.

[Continued from page 220.]

Another of the examples adduced by Bell is that of the heart. The famous Dr. Harvey examined at the request of Charles I., a nobleman of the Montgomery family, who, in consequence of an abscess, had a fistulous opening into the chest, through which the heart could be seen and handled. The great physiologist was astonished to find it insensible. "I then brought him," he says, "to the king, that he might behold and touch so extraordinary a thing, and that he might perceive, as I did, that unless, when we touched the outer skin, or when he saw our fingers in the cavity, this young nobleman knew not that we touched the heart." Yet it is to the heart that we refer our joys, our sorrows, and our affections; we speak of a good-hearted and a bad-hearted, a hard-hearted and a kind-hearted, a true-hearted and a heartless man. Shielded from physical violence by an out-work of bones, it is not invested with sensations which could have contributed nothing to its preservation, but while it can be grasped with the fingers and give no intimation of the fact to its possessor, it unmistakeably responds to the varied emotions of the mind, and by the general consent of mankind is pronounced the seat of our pleasures, griefs, sympathies, hatreds, and love. Persons have frequently dropped down dead from the vehemence with which it contracts or expands upon the sudden announcement of good or bad news—its muscular walls being strained too far in the upward or downward direction to enable them to return—and one of the purposes which this property of the heart is probably designed to subserve is to put a check upon the passions through the alarming physical sensations they excite.

The brain, again, is enclosed in a bony case. All our bodily sensations are dependent upon the nerves, but even the nerves do not give rise to feeling unless they are in connexion with the brain. The nervous chord which, in familiar language, is called the spinal marrow, is the channel by which this communication is kept up as to the major part of them; and when a section of what may be termed the great trunk-road for the conveyance of our sensations is diseased, and by the breach in its continuity the nerves below the disordered part can no longer send their accustomed intelligence to the brain, the portion of the body which thus becomes isolated may be burned or hacked, and no more pain will result than if it belonged to a dead carcass instead of to a living man. The brain, therefore, in subordination to the mind, is the physical centre of all sensation. Yet, strange to say, it is itself insensible to the wounds which are torture to the skin, and which wounds the brain alone en-

ables us to feel. "It is as insensible," says Sir Charles Bell, "as the leather of our shoe, and a piece may be cut off without interrupting the patient in the sentence that he is uttering." Because the bone which envelopes it is its protection against injuries from without, it has no perception of them when directed against its own fabric, though it is at the same time the sole source of the pain which those injuries inflict upon the other portions of the system. But the skull is no defence against the effects of intemperance, or a vitiated atmosphere, or too great mental toil. To these consequently the same brain, which has been created insensible to the cut of the knife, is rendered fully alive, and giddiness, head-aches, and apoplectic oppression give ample notice to us to stop the evil, unless we are prepared to pay the penalty.

Since neither pain can be felt, nor any other sense can be exercised except through the medium of the nerves, it is to these that we must trace the diversified impressions of which the body is susceptible. It is here that Sir Charles Bell made the beautiful discovery which entitles him to be ranked among the greatest physiologists the world has produced. Pairs of nerves are given off from the spinal cord at short intervals along its entire length. Ramifying throughout the body, they are the medium of communication between the various textures and the spine, and, by means of the spine, with the brain. Each nerve has two roots which issue separately from the side of the spinal cord, but almost immediately coalesce and run together like a single cylinder. Sir Charles Bell detected the leading fact, which has thrown such a flood of light upon the nervous system, that one of these roots consisted exclusively of sensitive fibres, and its fellow entirely of fibres of motion. Irritate the root which emerges nearest to the back of the cord, and the suffering is intense. Irritate the root which comes out towards the front of the cord, and no pain whatever is felt, but irrepressible muscular movements are provoked. Again, divide the first, which is called the posterior root, and the sensibility of the parts which it supplies is destroyed, while the power of motion remains complete. Divide the second or anterior root, and there is an end to motion in the parts to which its fibres lead, while the sensation continues as acute as ever. The two sorts of fibres which run together for a large portion of their length in a single cord, and which are apparently identical in structure, have yet offices as distinct as seeing and hearing, and which can be no more interchanged than we can hear with the eye or see with the ear. The same nerve, for any thing we can discover to the contrary, might have had the double endowment of giving rise to both feeling and motion, just as the nerve of taste appears to be also a nerve of common sensation, but this would have confounded the entire scheme for the regulation of pain. The muscles which are constructed for producing movement must be pervaded by motor nerves. If these had been as instrumental in exciting feeling as in causing the contractions by which we sit down, stand up, run, walk, raise weights, and strike blows, the interior textures would have been as sensitive as the skin, and sitting down, standing up, running, and walking would have been operations as painful as a disease. In the marvellous plan of Providence similar fibres have been invested with separate functions; and the hidden muscles being plentifully supplied with nerves of motion, and sparingly furnished with the nerves of sensation which confer such exquisite properties upon our outer integuments, each organ fulfils its own end without detriment to the system.

Notwithstanding the subdued sensibility of the muscles, they nevertheless are possessed of a property which has been termed by Sir Charles Bell the muscular sense,—a sense which is absolutely essential to the sustained performance of many of the commonest actions of life. If, he says, we shut our eyes, we can still tell the position of our limbs—whether the arm, for instance, is held out, or whether it hangs loose by our side. By what means is the mind cognisant of this circumstance, since we neither touch nor see anything? Mainly by a consciousness proceeding from the muscles themselves, which informs us of their state, and tells us where they are and what they are about when there is no second channel through which the knowledge can be fully attained. The cases in which the faculty is destroyed best show its use. Sir Charles Bell attended a woman who had lost the muscular power of one arm, but retained it in the other. Though the muscular power, however, remained, the muscular sensibility was extinct, and the result was that when she used the serviceable arm to hold her infant to her bosom, it only did its duty while her eyes were kept fixed upon it. The moment any object withdrew her attention, her arm gradually relaxed, and the child was in danger of falling. In the same way we have seen a paralytic who could raise his glass to his lips as long as he continued to gaze upon it, but if he looked off it for a second it slipped through his hands. In these instances there is no longer a muscular sense to acquaint us with what the muscles are doing and to regulate their exercise. The necessary knowledge can then be obtained through the vision alone, and directly this source of information fails us also, the muscles speedily cease to exert themselves, just as if there were no glass or infant to sustain. The blind man in such a case would have no use from his arms at all; and in those who can see, how imperfectly does the visual supply the place of the muscular sense! How beautiful is the adaptation which, in with-

holding from particular textures the sensitiveness which occasions needless pain, yet confers upon them a nicety of perception which reveals to the mind every change in their position, and their precise adjustment when they are at rest?

The principle is apparent in all the special nerves of sense. They have a sensibility of the kind which the particular organ requires, but they are dead to every feeling besides. Unless the same nervous trunk contains fibres differing in function, the nerve of taste, as we have already intimated, is equally a nerve of common sensibility. But this is no exception to the rule which ordains that the sensibility shall be limited to what its purpose demands. That we may not introduce substances into our mouths so hot or so cold as to destroy the parts with which they came in contact, it was necessary that the tongue should be a judge of temperature; and that we might the better manage our food to mastication, it was needful that it should have a perception of the surfaces of objects. These properties must be exercised in conjunction with the taste; and whether both are affected through a single nerve, or whether the nerves of touch and taste are distinct fibres blended into one cord, makes no difference in the contrivance. Both sensations exist at the same point, because both are required there for the pleasure and welfare of man.

The olfactory nerve is neither capable of producing motion or experiencing ordinary pain. Though there are nerves of common sensibility in its neighborhood, which are roused by irritating applications, such as snuff, and by the various causes which affect the skin, the nerve of smell perceives odors, and odors alone. The nerve of hearing, in like manner, can only hear, and the nerve of vision, with the exception of being concerned in certain muscular movements, can only see. A substance may be designed to address itself to more senses than one, as the food which is pleasant to the palate may be no less grateful to the nose, but it cannot on that account be smelt by the first or tasted by the second. Each sense is kept to its own sphere; and though the same object should put them all into action at the same moment, they would all of them return a different response, and all be true to themselves. Nay, they will answer to a stimulus which has no resemblance to that for which they were primarily contrived; but however much the stimulus may vary, the sense will not depart from its regular function. Thus, if a small current of air is directed to the tongue, it occasions a taste like saltpetre; if the nerve of hearing is irritated, it gives the sensation of sound; if the retina, which is the expanded nerve of vision, is pricked, as in the operation of couching for the cataract, it gives the sensation of a spark. "An officer," says Sir Charles Bell, "who was shot through the bones of the face, felt as if there had been a flash of lightning, accompanied by a sound like the shutting of the door of St. Paul's." A blow from the fist will produce similar effects in a minor degree. An accumulation of blood in the capillary vessels of the several nerves will set the whole of the senses to work. "This one cause," says Dr. Kirkes in his excellent "Hand-book of Physiology," "begets in the retina, while the eyes are closed, the sensation of light; in the auditory nerve, the sensation of humming and ringing; in the olfactory nerves, the sense of odors; and in the nerves of feeling, the sensation of pain." No wonder that sounds are often heard when there is no noise, and luminous appearances seen when there is no light, since the excitement of the nerves by the prick of a needle or the congestion of disease is ample for the purpose. The simple pressure of the finger upon the eyeball will evoke all the colors of the rainbow. In the midst of this insensibility of the nerves of special sense to every sensation except that which is fitted to the function for which each are intended, they have yet a protective pain of their own, which is no less efficient for its end than that of the skin. The nose is impatient of bad smells, and impels us to shun their noxious influence. A single organ of limited extent serves in this way to guard the entire body from one class of evils. How intolerable would have been the annoyance, how useless, and perhaps how fatal, if the property had been spread over the whole of the outer integuments, and we had been as sensible of stenches at every pore as of cuts and of burns! The optic nerve, which is unconscious of other kinds of injuries, is utterly intolerant of a too dazzling light. Placed at some distance beyond the surface, the bones of the skull and the sensitive coat of the eye are its security against wounds; but unless the orb of day was to be the plague instead of the blessing of man, the skin which is our protection against so many dangers could not have been made incapable of being turned to the full blaze of a meridian sun, while with all its obtuseness to laceration, the optic nerve is alive to evils from which there is no other defence, and is its own guardian against an excess of light.

[To be continued.]

HUB ME.

Passing along Broadway some time ago, says Dr. Hall in his "Journal of Health," a vehicle was arrested by some slight obstruction, and the horses were not quite able to start it; the driver saw at once that but a very little aid was needed, and, turning to another Jehu who was coming behind him, said, "*Hub me, shipmate.*" The other saw as instantly what was required, and without a moment's hesitation or stop, so guided his own horses as to make the hub of

his own carriage strike lightly against that of the other, and each giving his own animals a touch of the whip, both carriages moved on almost as easily as if nothing had happened.

How many times in the great Broadway of life might men "hub one another without incommoding themselves! A friendly act done, an obligation incurred, some future act of kindness provoked, at the expense of a word, or only a single moment's time.

The most of us regard omnibus drivers as rather rough specimens of humanity; but ever since the incident just related we have seen a moral beauty in in the odd expression, "*Hub me shipmate.*"

For Friends' Intelligencer.

THE INVITATION.

Come—let us mingle at the joyous fountain,
Come—whilst the spirit of thy life is fair;
Come—hear glad tidings from the holy mountain,
Learn in thy youth the cross and crown to share.

Brightly the gems of nature glitter round thee,
And Love's sweet spirit whispers in thy ear;
Flee from temptation e'er its chain hath bound thee,
Trust thou in God, and banish earthly fear.

Struggle no longer with the cares that grieve thee,
Weighing thee downward with their useless dross;
There is a power Divine which can relieve thee,
If thou wilt lay thy burden at the cross.

Then shalt thou rise on wings of light and beauty,
Then shalt thou run thy race with Christian joy;
Then shalt thou know thy pleasures as thy duty,
And Heavenly grace thy inward thoughts employ.

Come—take upon thy neck the yoke of meekness,
Pray for that strength which girds the loins aright;
Listen, Oh! listen to those words of sweetness,
My Yoke is easy, and my Burden light.

3d mo., 25th, 1858. S.

For Friends' Intelligencer.

"*In the morning sow thy seed, and in the evening withhold not thy hand.*"

Sow thou thy seed, with careful hand,
Where'er and when thy Master tells;
Whether it be on stony land,
Or where to life the seedling swells;
Sow thou thy seed in faith, and leave
Thy Master's Hand to bind the sheaf.

In doubt and darkness dost thou pine,
Questioning thy power of usefulness?
Distrustful that a hand like thine
Can ever soothe, sustain, or bless?
Trust—and in faith move on thy way,
Sowing thy seed, still day by day.

A smile of love, a word of cheer,
May gladden some poor heart, and lend
Strength to combat temptations here,
Hope to push onward to the end;
A little word! what deeds may grow
Out of a seedling scattered so.

Sow thou thy seed, sow thou thy seed,
The harvest thou may'st never see,
No care of thine, nor anxious heed,
May bring it to maturity;
Sow in thy humble trust, and rest;
Thy labor some time shall be blest.

In hearts oppressed with care and woe,
In hearts devoted all to earth,
Mid'st tares that most luxuriant grow,
Mid'st flowers of a holier birth;
Whate'er the task, thy summons heed,
And in obedience—sow thy seed.

He, who in love, preserves the germ
Of life in every tiny root;
Shelt'ring it close from wind and storm,
Perfecting it to flower and fruit;
If thou obey Him, He will weed
Each flower of thine; then sow thy seed.

F.

THE WHITE SPARROW.

"Sleep, he is the worst of thieves;
He steals the half of life."

No more common complaint is to be heard now-a-days, from the lips of housewives, than that of the laziness and unthrifty habits of domestic servants. Mothers and grandmothers are often wont to tell the young housekeeper that matters were otherwise in their days; and it has sometimes occurred to us, whether the fault may not lie as much in the degenerate habits of the masters and mistresses of the present generation, as in any defect peculiar to their dependents. Were the lady of the house more frequently to rise at five or six in the morning, as in the 'good old days lang syne,' perchance she would not so often have to complain that rooms were carelessly swept, that work was left undone, or fires lighted too late.

A useful hint on this subject may, we think, be gathered from a proverbial tale, related by a favorite German writer, and entitled:

"He who would thrive
Must the White Sparrow see."

The meaning of the proverb is not at first sight so apparent as that of some others which circulate amongst us, such as 'Early habits make the man,' or, 'Honesty is the best policy,' &c.; but the moral signification it is intended to convey is not the less true and important. I will, therefore, here relate the story connected with its origin; even as I received it myself from the lips of an old friend.

There was a certain farmer, with whom everything seemed to grow worse from year to year. His cattle died one by one—the product of his land was not half what it ought to be—in fact, all his property was 'going to ruin.' Scarcely a week passed by that either the tax gatherer or a creditor did not come to his window, and, addressing him with a courteous bow, say, 'I am really very sorry, Herr Ruckwarts, to put you to inconvenience, but I am compelled to do my duty.' The old friends of Herr Ruckwarts also tried their best to do their duty by him—they advised, they entreated, and they helped him, but all in vain; and one after another gave him up in despair, declaring with a sigh that,

'as for poor Ruckwarts, there was no use in trying to help him—he was *past* being helped.'

He had one friend, however, whose heart was in the right place, and who was not only a good man, but a very prudent and clear-sighted man, acknowledged to be so by all the neighbors. This friend, in the goodness of his heart, thought he would not give Herr Ruckwarts up altogether, without making one more attempt to save him; so one day, as they were drinking their glass of beer together, he led the conversation, as though accidentally, to the subject of sparrows, related many anecdotes of these birds, and observed how much they had multiplied of late, and how very cunning and voracious they had become.

Herr Ruckwarts shook his head gravely in answer to this observation, and said, "They were indeed most destructive creatures—for his part, he had not the least doubt that it was entirely owing to them his harvest had been of late years so very unproductive.'

To this conjecture the good friend made no rejoinder; but after a moment's pause he continued the conversation by inquiring: 'Neighbor, have you ever seen a white sparrow?'

'No!' replied Ruckwarts, 'the sparrows which alight in my fields are all quite gray.'

'That is very probable,' rejoined his friend—'the habits of the white sparrows are peculiar to itself.' Only one comes into the world every year, and being so different to its fellows, the other sparrows take a dislike to it, and peck at it when it appears amongst them. For this reason it seeks its food early in the morning, before the rest of the feathered tribe are astir, and then goes back to its nest for the rest of the day.

'That is very strange,' exclaimed Ruckwarts. 'I must really try and get a sight at that sparrow, and, if possible, I will catch it too.' On the morning which followed this conversation, the farmer rose with the sun, and sallied forth into the field; he walked around his farm, searched his farm-yard in every corner, examined the roofs of his garners, and the trees of his orchard, to see whether he could discover any traces of the wonderful white sparrow. But the white sparrow, to the great disappointment of the farmer, would not show itself, or stir from its imaginary nest. What vexed the farmer, however, still more was, that although the sun stood high in the heavens by the time he had completed his rounds, not one of the farm hands were astir, they, too, seemed resolved not to leave their nests. Meanwhile, the cattle in their stalls were bellowing with hunger, and not a soul was near to give them fodder.

Herr Ruckwarts was reflecting on the disadvantages of this state of things, when suddenly he perceived a lad coming out of the house, carrying a sack of wheat upon his shoulders. He seemed to be in great haste to get out of the precincts of the farm. Herr Ruckwarts soon perceived that his steps were not bent towards the mill, but towards the public house, where Casper had unhappily a long score to pay. He hastened after the astonished youth, who believed his master to be still in the enjoyment of his morning nap, and quickly relieved him of his burden.

The farmer next bent his steps to the cow-house, and peeping in to see whether the white sparrow had perchance taken refuge, he discovered to his dismay that the milkmaid was handing a liberal portion of the milk through the window to her neighbor, to mix with her morning coffee.

'A pretty sort of housekeeping this is!' thought the farmer to himself, as he hastened to his wife's apartment and roused her from her slumbers. 'As sure as my name is Ruckwarts,' he exclaimed, in a somewhat angry tone, 'there must be an end to these lazy habits. Everything is growing wrong for the want of some one to look after them! So far as I am concerned, at all events, I will rise every day at the same hour I rose this morning, and then I shall get my farm clear of all those who do not intend to do their duty properly. Besides, who knows but some fine morning or other I may succeed in catching the white sparrow?'

Days and weeks passed on. The farmer adhered to his resolution; but he soon forgot the white sparrow, and only looked after his cattle and his cornfields. Soon everything around him wore a flourishing aspect, and men began to observe that "Herr Ruckwarts (backwards) now well deserved to be called Herr Vorwarts (forwards.') In due course of time, his old friend again came to spend the day with him, and inquired in a humorous tone, 'Well, my good fellow, how are you getting on now? Have you succeeded in getting a glimpse of the white sparrow?'

The farmer only replied to this question by a smile; and then, holding out his hand to his old friend, he said, 'God bless you, Herder! you have saved me and my family from ruin.'

Often, in after years, when Ruckwarts, was a prosperous man, respected by his neighbors, and beloved by his well-ordered household, he was wont to relate this history of his early life; and thus, by degrees, the saying passed into a proverb—'He who would thrive must see the white sparrow.'

Subjection to the will of God.—Becoming thus subject to the will of God, and feeling that we are indebted for all things to Redeeming Goodness, we shall learn to patiently suffer, and gratefully enjoy; and shall know a happiness which no outward treasure could ever impart

All are accountable to God.—On him we depend for every breath that we draw; to Him we are accountable every day that we live.

MAPLE SUGAR OF THE UNITED STATES.

The sugar-maple, *Acer saccharinum*, is very common in the west and the north of the United States. These trees, in many instances, entirely cover a large extent of surface, but they are more frequently dispersed through the forests among other trees, in which case from twenty-five to thirty of them are met with in an acre. This tree thrives best in rich soils, where it attains the height of the ever-green oak, or of a large apple-tree. The trunk is sometimes from two to three feet in diameter. In the spring, the maple is covered with flowers before the leaves appear. It is supposed to arrive at its complete development at the age of twenty or twenty-five years.

The sap of the maple is obtained by perforating the trunk to the depth of an inch or two. A tube is then fixed in the perforation, slightly inclined, but not penetrating to the bottom of the hole; and underneath this species of gutter a vessel is placed to receive the liquor which flows. It is customary to perforate the tree, in the first instance, on the side facing the south. When the flow of the sap begins to diminish, another opening is made on the north side. The most favorable period for this operation is the commencement of spring—February, March, and April. The sap flows for five or six weeks, and most liquor is obtained when the days are warm and the nights cool. The quantity obtained in twenty-four hours varies from a quarter of a gallon to five gallons. The temperature of the air exercises a great influence on the discharge of the sap; for example, it ceases entirely when a frosty night succeeds a warm day.

These trees do not appear to suffer much from repeated perforation. A tree has been described as having flowered after having yielded sugar for forty-two consecutive years. In general, however, they do not yield for so long a period. In certain cases, which must be considered as exceptional ones, 104 quarts of sap have been obtained in twenty-four hours, yielding nearly five pounds of crystallized sugar. But a maple of ordinary dimensions yields, in a favorable season, 113 quarts of sap, yielding five and a half pounds of sugar. This is considered as the average annual product of a tree.

We may, therefore, conclude that the sap generally contains about two and a half per cent of sugar. It is stated that the *Acer saccharinum* becomes more productive by cultivation. Thus the maples of the forests which have been isolated by removing the surrounding trees, which intercepted the sun's rays, and still more those transplanted into gardens, have yielded a richer and more abundant sap, containing as much as three per cent. of sugar.

The extraction of the sugar from the sap of the maple presents nothing remarkable. A method is followed analogous to that adopted in the case of cane juice. It ought to be soon boiled, as it alters and ferments very rapidly; so much so, that in many parts of the United States an alcoholic liquor is made, analogous to that yielded by the juice of the cane which has undergone fermentation (the *Flangourin* and *Chicha* of South America). In the preparation of maple sugar a notable quantity of molasses is obtained, caused by the abundance of soluble salts existing in the sap. We know also that the ash obtained by burning the maple is very rich in potash. The sap contains acetate, muriate, and sulphate of potash, acid phosphate of lime, and magnesia.

The formation of sugar does not take place in the roots of the maple, but in the ligneous parts. The sap is found to be richer in sugar the higher it is in the tree, up to a certain point, beyond which it is constant.

Crude maple sugar is of a brownish color; it contains a small quantity of mannite. This mannite is especially found in the molasses of this sugar containing saline matter. This sugar is not refined, it is consumed in the localities in which it is produced, and there would be great loss in the process of refining. The manufacture adopted is a rude one, being conducted in the forests themselves, in the open air, in iron pans, containing about 100 quarts each.

The manufacture of this kind of sugar is a great resource for new settlers in the countries where the sugar maple grows abundantly in the forests, but it is evident that this method of procuring sugar can only be successfully followed in certain localities, far removed from centres of population, where it may be substituted for cane-sugar by the inhabitants of those localities.

Beverley, in his history of Virginia, states that the Indians made maple sugar before this country was occupied by Europeans; others, on the contrary, affirm that it was quite unknown to them, or at any rate that certain tribes were not acquainted with it.

THE SPONGE.

The twilight monad, so minute that a thousand millions may be contained in a drop of water, consists of a tiny speck of pellucid matter, rounded in form, and supposed from its movements and from analogy to be furnished with a single *cilium*, by the lashing action of which it rows itself through the water. As these *cilia* belong to all the lower classes of animals, and are the source of all their voluntary movements, we copy the description of them.

"The form of these essential organs is that of slender tapering hairs, commonly arranged in rows, resembling the eyelashes, whence their name. The base of each hair is attached to the surface of the body to which it belongs, its whole length beside being free. During life each *cilium* main-

tains a uniform motion of a waving or lashing kind, bending down in one direction and then straightening itself again. This movement is not performed by all the *cilia* together or in unison, but in rapid succession; for example, the instant after one has begun to bend, the next begins, then the next, and so on; so that before the first has resumed its erect condition, perhaps half a dozen of its successors are in different degrees of flexure. This sort of motion will be better understood by referring to that beautiful and familiar spectacle, the waves produced by the breeze upon a field of wheat. The motion is exactly the same in both cases. The wind, as it sweeps along, bends each stalk in turn, and each in turn resumes its erect posture; thus the waves run steadily on, though the stalks of wheat never remove from their place. The appearance of the ciliary wave, when viewed under favorable circumstances with a good microscope, is so exquisitely charming, that even those who have been long familiar with it can scarcely ever behold it without admiration.

Besides serving as instruments of locomotion, by acting as paddles to row the animal rapidly along, these *cilia*, by their vigorous vibration, form currents in the water, which bring to the entrance of the stomach whatever articles of matter suitable for food may be floating about. It was by the discovery of such *cilia* capable of spontaneous movement, that the sponges, so long supposed to be of vegetable origin, were transferred to the animal kingdom.

"Many of our readers are probably cognizant of only one kind of sponge—the soft, plump, wooly, pale brown article, so indispensable in our dressing rooms; or, at the most, two, if they chance to have noticed the large-pored, coarser sort, with which the grooms wash carriages. It may surprise such persons to be informed that the streams and shores of the British Isles produce sixty or seventy distinct species of sponge; and that every coast, especially in the tropical seas, where they are very numerous and varied, has species peculiar to itself.

A sponge, as it is used in domestic economy, is merely a skeleton; it is the solid frame-work which in life supported the softer flesh. This skeleton is composed of one or two of the following substances: flint, lime, and a peculiar horny matter. The first two are crystallized, and take the appearance of spicular needles, either simple or compound, varying greatly as to their length, thickness, shape, and curvature, but constant in form in the same species. The horny matter, of which the common, domestic sponge affords an example, is arranged in slender, elastic, translucent, tough, solid fibres, united to each other irregularly at various points, and in every direction, and thus forming an open, netted mass, commensurate with the size of the whole sponge. The solid parts are, during life, invested with a glary, transparent slime, so fluid in most species as to run off when the sponge is taken out of its native element: yet this clear slime is the flesh of the animal.

"The spicula, whether of flint or lime, or the horny fibres, are so arranged as to form numberless pores with which the whole animal is perforated. It is to these that our common sponge owes its most valuable property of imbibing and retaining water. In life the surrounding water is made to flow through these pores by a continual current (interrupted, however, at the will of the animal), from without to the interior of the body. But whither goes this current? The pores lead into large channels, which also run through the body like the drains from individual houses which run into the main sewers; and these open on the exterior of the body by more or less conspicuous orifices, called *oscula* or mouths. From these latter the effete water is poured in forcible streams, and thus a circulating current is maintained.

"This is a very different process from the absorption of water by capillary attraction. The one is mechanical, the other vital operation. The latter is performed only during life and health, and contributes to the nourishment of the animal; the former goes on after death, and is of no benefit to the sponge though very useful to its possessors. The one may be compared to that indiscriminate devouring of books which we sometimes see in great readers—a voracity insatiable, indeed, but which leaves the mind as empty as before; the other to that guarded select reading which ever watches to extract mental food, separating and rejecting, by a secret but potent alchemy, the useless and the bad.

Another substance familiar to us, but often misunderstood, is the coral, which, like the sponge, is as we see it, a skeleton; the animal—not an insect—consisting through life of a film of gelatinous flesh investing it entirely, and "so tightly stretched as to be reduced to an invisible tenuity."

But to return to the sponges. These skeletons, not at the feast but at the toilet, afford a means of subsistence to many persons in the Mediterranean islands; and they get a living far from contemptible, as "their goods are always wanted by the Turks, who use an incredible number of sponges at their bathings and washings." In the island of Himia, a girl is not permitted by her relations to marry before she has brought up a certain quantity of sponges, and before she can give a proof of her agility by taking them from a certain depth. In another island it is the custom for the father of a marriageable daughter to bestow her on the best diver among her suitors. "He that can stay longest in the water, and gather the most sponges, marries the maid."

At certain seasons of the year, within the channel of the living sponge, innumerable yellow

granules are to be seen imbedded in the gelatinous flesh. These gradually increase in size, until at length one by one becomes freed, and is immediately hurried along to the nearest outlet, by the constant current. This little oval gemmule is a young spongelet, which, unlike its parent, has the power of locomotion, being furnished with excessively minute *cilia*, by the aid of which it rows itself through the water at pleasure—a most wise arrangement for the distribution of the race in the still water under which they live, with no winds to waft them, like the seeds of vegetables, to distant places. When weary of wandering, the spongelet selects a suitable locality for settlement, spreads out an adhesive film of gelatinous matter, and soon developes all the structure and performs all the functions of its parent.—*Gosse.*

PURE AIR.

Whatever renders the blood impure, tends to originate consumption. Whatever makes the air impure, makes the blood impure. It is the air we breathe which purifies the blood. And as, if the water we use to wash our clothing is dirty, it is impossible to wash the clothing clean, so if the air we breathe is impure, it is impossible for it to abstract the impurities from the blood. What, then, are some of the more prominent things which render the air impure? It is the nature of still water to become impure. Running water purifies itself. Air in motion, draughts of air, are self-purifiers. Thus it is that the air of a close room becomes inevitably impure. Thus it is that close rooms bring consumption to countless thousands. Hence all rooms should be so constructed as to have a constant draught of air passing through them. A man of ordinary size renders a hogshead of air unfit for breathing, and consumes its blood-purifying qualities every hour. Hence, sleeping in close rooms, even though alone, or sitting for a very short time in a crowded vehicle, or among a large assembly, is perfectly corrupting to the blood. Close bedrooms make the graves of multitudes.—*Hall's Book of Consumption.*

Moderation.—Desire not things that are hurtful or useless, and you will the more easily obtain those that are healthful and useful.

Religious Instruction.—Cherish a religious care for the best interests of your children. Endeavor to direct their minds to Him who is the everliving source of goodness; by whose Almighty power all were created, and are kept in being. Let religious instruction be given always with seriousness and affection.

PHILADELPHIA MARKETS.

Flour and Meal.—Breadstuffs are still inactive. Sales of flour are reported at $4 25 for standard brands, $4 44 for extra, and $4 75 for extra family. There is little or no demand for shipment. Small sales are making for home consumption from $4 25 up to $5 75, as in quality. Rye Flour and Corn Meal are scarce, and firm at $3 31¼ for the former and $3 37½ for the latter.

Grain.—Wheat is steady at the recent advance. Sales of fair and good Red at 90c. a $1 03 per bushel, and White from $1 00 to 1 15 per bushel. Rye is wanted at 66 a 68 cts., with little coming forward. The demand for Corn is steady, with light receipts. Sales of Yellow at 73 a 74 cts., afloat, and 71 and 72 c from store. Oats are in fair demand at 40c. per bushel for Delaware, and 41c for Penna.

Cloverseed is in steady demand at $4 25 a 4 50 per 64 lbs. Nothing doing in Timothy and Flaxseed. The latter is in demand at $1 55 per bushel.

MOORESTOWN FEMALE BOARDING SCHOOL. The next Term will commence first second day in 10th Month, 1858, and continue 40 weeks.

Mary S. Lippincott, Proprietor.

Moorestown, Burlington Co., N. J.

HIGHLAND DALE.—This is the name of the farm of Charles and Catherine Foulke, in Monroe county, Pa; it is something over a mile from Stroudsburg, the county town, and within four miles of the Delaware Water Gap.

The situation is elevated, being on the crown of one of the ridges of mountains in that region.

It has been a resort for invalids and others for several years, and is now open for boarders. Some improvements have been made since last season, including an Ice house and Carriage house.

Cold and warm water has been generally introduced over the house. The rail cars leave Camden for Stroudsburg daily.

5th mo 29th, 1858.—8t.

GREEN LAWN BOARDING SCHOOL for Girls will open the summer term the 3d of 5th month, (May,) and continue twenty weeks. All the branches comprising a thorough English education are taught, drawing included. Terms $55; for those not exceeding twelve years of age, $50. No extras, except the French Language, Painting and Ornamental Needleworks, each $5 per term. This school is handsomely situated near Unionville, Chester county, Pa., nine miles from West Chester, and sixteen north-west from Wilmington. Daily stages passing too and from each place, by which scholars are conveyed to the school. For further particulars address,

EDITH B. CHALFANT,
Proprietor and Principal.

Unionvile P. O., Chester Co., Pa.

CHESTERFIELD BOARDING SCHOOL FOR YOUNG MEN AND BOYS.—The summer session of this Institution will commence on the 17th of 5th mo., 1858, and continue twenty weeks.

Terms, $70 per session, one half payable in advance, the other in the middle of the session.

No extra charges. For further information, address

HENRY W. RIDGWAY,
Crosswicks P. O., Burlington Co., N. J.
4th mo., 3—3m.

LONDON GROVE BOARDING SCHOOL FOR YOUNG MEN AND BOYS.—It is intended to commence the next session of this Institution on the 3d of 5th mo.—Terms, $60 for five months. For references, and further particulars enquire for circulars of BENJAMIN SWAYNE, Principal,
4th mo.—3. London Grove P. O., Chester Co., Pa.

Merrihew & Thompson, Prs., Lodge St, North side Penna. Bank